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ABSTRACT

The relative effectiveness of including behavioral objectives, classified according to the major levels of cognition, in independent study materials for high school juniors is analyzed in this brief summary of the author's dissertation. The three major questions under consideration are whether: (1) the use of behavioral objectives has an effect upon learning and retention of social studies knowledge and concepts, (2) the effectiveness is the same for all levels of cognition, and (3) the use of behavioral objectives at the various levels of cognition affect both learning and retention in a similar manner. Bloom's "Taxonomy of Education Objectives: Cognitive Domain" served as a guide in the formulation and classification of the objectives and test questions. Ninety-three students in four social studies classes were tested as control and experimental sample groups. The experimental group's instructions contained behavioral objectives for the six levels of cognition and the instructions of the control group did not. The results indicate that behavioral objectives by themselves are virtually useless and perhaps even deleterious unless some activity is provided to ensure that their purpose, value, and intent are made clear to the learner. The highest mean scores are at the comprehension level. Although the experimental group had higher mean scores for learning at the knowledge, comprehension, and synthesis levels, retention at the synthesis level by the control group was better. (DE)

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USE OF BEHAVIORAL OBJECTIVES WITH INDEPENDENT STUDY MATERIALS

The purpose of this study was to assess the relative effectiveness of including behavioral objectives classified according to the major levels of cognition in independent study materials for the initial learning and retention of social studies content by high school juniors as opposed to independent study without stated, behavioral objectives. Several questions were under consideration:

1. *Does the use of behavioral objectives have an effect on the learning and retention of social studies knowledge and concepts by eleventh-grade students?*
2. *Is the effectiveness of the use of behavioral objectives the same for all levels of cognition?*
3. *Does the use of behavioral objectives at the various levels of cognition affect both learning and retention in a similar manner?*

Bloom's Taxonomy of Educational Objectives: Cognitive Domain served as a guide in the formulation and classification of the objectives and test questions. The ninty-three subjects were members of four, intact, eleventh-grade, social studies classes. The relative effectiveness for learning and retention was measured by two administrations of a test that produced scores for the total test and for each of the six levels of cognition. No feedback was provided on the results of the first test until after the retention test was administered. True retention and gain scores were obtained by counting as retained only those items answered correctly on both tests and as gained those items answered correctly only on the retention test.

The treatment was the same for both groups except that the instructions for the experimental group contained behavioral objectives for the six levels of cognition and the instructions of the control group did not. It was hypothesized that the mean variate scores of the experimental group would be higher than those of the control group for the total teast and at each level of cognition.

Grade-piont averages, DAT Verbal scores, and the learning test scores were used as the covariates in thirty-seven analyses of covariance. Significant (.05) F values were obtained in three of the analyses. At the synthesis level the control group's mean retention adjusted for grade-point average, mean retention adjusted for learning, and mean true retention were significantly higher that the experimental group's. The thirty-seven analyses of covariance were all based on seven learning and seven retention scores for each group. Significance was found in only one of the fourteen cases - retention of synthesis-level learning. This suggests that the findings were probably due to chance.

It was concluded that behavioral objectives by themselves are virtually useless and perhaps even deleterious unless some activity is provided to ensure that their purpose, value, and intent are made clear to the learner.

The conflicting evidence in the literature may indicate that the value of objectives is very situation particular, depending upon such factors as the subject matter, the student population, method of instruction, time allotted for study, and the method of employment of the objectives. The results support the idea that merely stating objectives may just confuse the learner, which is in line with the negative implications that the concept of set has for specific or numerous objectives.

The highest mean scores were at the comprehension level and the expected trend for lower scores at higher cognitive levels was interrupted by relatively high scores at the synthesis level for learning, retention, and true retention. The experimental group had the higher mean scores for learning at the knowledge, comprehension, and synthesis levels, but these switched to the control group on the retention test.

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The only significant differences in the study were found for retention and true retention at the synthesis level. Since there were no significant differences in gain scores, the control group's significantly higher score for retention at the synthesis level was due to retention of initial learning. In other words, the experimental group forgot more at the synthesis level than the control group did. Since this did not happen at the knowledge and comprehension levels, the experimental group apparently treated synthesis-level learning the same as learning at the knowledge and comprehension levels while the control group did not. If the lack of objectives forced the control group to operate closer to a true synthesis, they should be expected to retain such learning better. This is the type of advantage that is cited for discovery-style, intuitive learning.

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